

**In The Specification:**

Please replace the paragraph on page 12, lines 12-23, as follows:

In order to test the accuracy of the method, dilution series were obtained for plasmid DNA and cDNA of the  $\beta$ -actin gene obtained from paired eyes obtained from wildtype mice. Paired whole eyes were homogenised in 0.5 ml of TriReagent (Sigma Aldrich) using ~~Fastprep~~ FASTPREP<sup>®</sup> tubes in a ~~FastPrep~~ FASTPREP<sup>®</sup> FP 120 (Q-Biogene). Total RNA was then extracted in TriReagent according to the manufacturer's instructions. RNA was resuspended at 60°C in 20 $\mu$ l of RNA Secure (Ambion). 1 $\mu$ g of total RNA was then treated with 2 units of Rnase-Free Dnase (Sigma Aldrich) for thirty minutes at 37°C to remove any traces of genomic DNA. Dnase-treated RNA was reverse transcribed with random decamers using a ~~RetroScript~~ RETROSCRIPT<sup>®</sup> kit (Ambion), according to the manufacturer's instructions. Once synthesised cDNA fidelity was tested by PCR, and samples were then stored at -20°C.

**Please replace the paragraph from page 12, line 25 to page 13, line 18, as follows:**

--Primers for  $\beta$ -actin were designed using ~~MaeVeeter~~ MACVECTOR<sup>®</sup> software (Accelrys, UK), and tested to ensure amplification of single discrete bands with no primer-dimers. Where possible, primers were designed to span introns to prevent genomic contamination. Primer sequences were as follows: Forward: 5'ACCAACTGGGACGATATGGAGAAGA 3' (**SEQ. ID NO: 1**),  $\beta$ -actin reverse:5'cgcacgatttcctctcagc 3' (403 bp product) (**SEQ. ID NO: 2**). All primers were

synthesised by Sigma Genosys. PCR products were ligated into pGEM-T Easy vector (Promega) and transformed in DH5 $\alpha$  competent cells (Invitrogen). Minipreps of isolated plasmid DNA were then prepared (Promega). Before use, plasmid concentration was determined by spectrophotometry using an Eppendorf BioPhotometer and Serial dilutions were performed to give final concentrations between  $10^3$  -  $10^6$  copies. Dilution series of cDNA were composed of three tenfold dilutions of wildtype ocular cDNA. Real-time PCR was conducted using Sybr #Green I Mastermix (Applied Biosystems) using an ABI PRISM<sup>TM</sup> 7700 Sequence Detection System. Each reaction contained 1  $\mu$ l of cDNA template along with 50 nM of primers in a final reaction volume of 25  $\mu$ l. Cycling parameters were 95°C for 10 minutes to activate DNA polymerase, then 40 cycles of 95°C for 15 seconds, 60°C for one minute with a final recording step of 78°C for twenty seconds to prevent any primer-dimer formation. Melting curves were performed using Dissociation Curves software (Applied Biosystems) to ensure only a single product was amplified, and samples were also run on a 3% agarose gel to confirm specificity.--